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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/731,777      | 12/09/2003  | Peter Ifju           | 5853-355            | 4921             |

30448 7590 10/21/2004

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| EXAMINER |
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HOLZEN, STEPHEN A

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

3644

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/731,777

Applicant(s)

IFJU ET AL.

Examiner

Stephen A. Holzen

Art Unit

3644

*RLW*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 25-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

***Election/Restrictions***

1. Claims 25-31 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/4/2004.
2. This application contains claim 25-31 drawn to an invention nonelected with traverse. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
3. The applicant's arguments with respect to claim 1 being a generic claim have been considered however they are not persuasive. Claim 1 is not generic because it recites limitations not found in claim 25. ("resilient material").

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 6-10, 12, 13, 17, 19-21, 23, and 24 rejected under 35 U.S.C. 102(b) as being anticipated by Christian et al (3,744,741).

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Re – Claims 1 and 12: Christian disclose a wing for a MAV having at least one layer of resilient material having a camber (#14) forming a concave surface facing downward, wherein the wing is bendable from a steady state position in a first direction such that tips of the wing may be bent toward the concave surface but not substantially in a second direction that is generally opposite to the first direction (~~see Figure~~ see Figures 1 and 4); and wherein the wing is capable of returning to the steady state position by releasing the tips of the wing. (see col. 1, lines 60-64). TL

Re – Claims 2, 6-10, 13, 17-21, 23, and 24: Christian et al disclose every aspect and limitation in these claims. (see Figures 1 and 4)

6. Claims 1-10, 12-21, 23, and 24 rejected under 35 U.S.C. 102(b) as being anticipated by Fuller (4,485,991).

Re – Claims 1 and 12: Fuller discloses a micro air vehicle having a central body, a wing attached to the body having at least one layer of resilient material having a camber forming a concave surface facing downwards (note that the claim language only says that “one layer” has a camber concave surface and not the entire wing, see upper skin #11 to Fuller), wherein the wing is bendable from a steady state position in a first direction such that the tips of the wing may be <sup>bent</sup> bend towards the concave surface but not substantially in a second direction that is generally opposite to the first direction; and wherein the wing is capable of returning to the steady state position by releasing the tips of the wing. (see figures 1 and 6) TL

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Re – Claims 2, 6-10, 13, 17-21, 23, and 24: Fuller discloses ~~discloses~~ every aspect and limitation in these claims. (see Figures 1 and 6) TL

Re- Claims 3, 4, 5, 14, 15, and 16: Fuller discloses that it is known to use these mixtures of materials for the airfoil and resilient materials (see Col. 2, lines 50-61, and Col. 4, lines 28-36)

Re – Claim 23: Fuller discloses a tail coupled to the central body that is generally orthogonal to the wing (23)

Re – Claim 24: Fuller discloses a tail coupled to the central body that is generally vertical to the wing. (23)

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 11 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuller or Christian et al in view of J.L. G. Fitzpatrick (2,783,955). Fuller and Christian et al do not disclose a riser section forming a concave portion on an upper surface of the wing proximate to a trailing edge of the wing. Fitzpatrick does teach that it is known to have a riser section forming a concave portion on an upper surface of the wing proximate to a trailing edge of the wing. (see concave portions of wing #34) It would have been obvious at the time of the invention to one having ordinary skill in the

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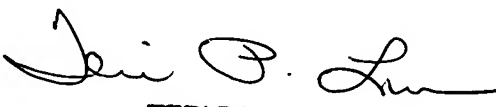
art to include the teachings of Fitzpatrick into the devices of Fuller <sup>or</sup> Christian for the purpose of increasing maneuverability and lift. TL

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen A. Holzen whose telephone number is 703-308-2484. The examiner can normally be reached on M-F 7:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 703 305-7421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sah

  
**TERI P. LUU**  
**SUPERVISORY PRIMARY EXAMINER**